



Cairo University

# Mohamed Hussian Sabry, Ph.D.

Professor (Associate) of Statistics

Full Name: **Mohamed Abd EL Hamid Hussian Sabry**

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Cairo University, Institute of Statistical Studies and Research, Department of Statistics



12/7/1969

## Current Position

Faculty Staff, Professor (Associate), Cairo University, Faculty of Graduate Studies for Statistical Research, Since 2014.

## University Education

2001 - 2005 Sweden	Ph.D. - Environmental statistics, <b><u>Linköping University, Sweden</u></b> . The doctoral thesis titled "Monotonic and Semiparametric Regression for the Detection of Trends in Environmental Quality Data", <a href="http://www.diva-portal.org/liu/abstract.xsql?dbid=5124">http://www.diva-portal.org/liu/abstract.xsql?dbid=5124</a>
1993 – 1997 Egypt	M.sc. - Mathematical statistics, Ain Shams University, Cairo, Egypt. The Master thesis titled " The analytical form of the characteristics of some queuing systems and their applications"
1986 – 1990 Egypt	B.Sc. Pure Mathematics and Mathematical Statistics, Ain Shams University, Egypt

## Research Contributions

2001-2005	Member of the international Environmetrics Society (TIES).
2001-2005	Member of the environmental statistics group at the Department of Mathematics-Linkoping university–Sweden:
2003-2005	Member of the Major project <b><u>ENGO - Environmental goal achievement under uncertainty</u></b> , Department of Mathematics - Linkoping University –Sweden
2001-2003	Member of the Major project, <b><u>IMPACT - Estimation of human impact in the presence of natural fluctuations</u></b> , chaired by <b><u>Anders Grimvall</u></b> the professor of statistics, Department of Mathematics - Linkoping University –Sweden

## Research Interest

- Probability Theory.
- Nonparametric Analysis
- Multivariate Analysis.
- Statistical inference.
- Distribution Theory.
- Regression Analysis.
- Applied Multivariate Analysis.
- Environmental statistics.

## **Employment History**

2019 - 2020	Part time teaching, The American university at Cairo, Department of Mathematics
2017-	Instructor at the faculty of graduate studies for statistical research, professional studies program (Diploma and Master level)
2017 -2018	Part time teaching - Actuarial science program – Faculty of Commerce – Cairo University
2016 -2018	Part time teaching - DBA program - Faculty of Commerce – Cairo University
2016 - 2018	Part time teaching - MBA program - Arab Academy for Science Technology & Maritime Transport (AASTMT)
6/ 2006-8/2014	Assistant Professor of Mathematical statistics, Department of mathematical statistics, Institute of statistical studies and research, Cairo University, Egypt.
9/2009 – 6/2014	Assistant Professor of Mathematical statistics, department of Statistics and Operations Research, Faculty of Science, King Saud University, Kingdom of Saudi Arabia
9/2007 – 7/2008	Assistant Professor of Mathematical statistics, department of natural sciences, Riyadh community College, King Saud university, Kingdom of Saudi Arabia
4/2007- 9/2007	A committee member, the Quality Assurance and Accreditation Center, Institute of statistical studies and research (ISSR), Cairo university
2/2007 - 9/ 2007	Visiting Lecturer, Cairo Demographic Center (CDC) - Cairo, Egypt
2/2007 - 9/ 2007	Visiting Assistant Professor, faculty of dentistry, October Modern Sciences and Arts University (MSA), 6 <sup>th</sup> of October, Egypt.
2006 - 2007 & 2009 – 2009	Visiting Assistant Professor, the faculty of commerce, English section, Sohage University., Egypt
2006- 2007-	Visiting Assistant Professor, the faculty of commerce, English section, Assiut University, Egypt
2001- 2005	Ph-D Student and a member of the environmental statistics group, division of statistics, department of mathematics - Linkoping University, Sweden.
1997 - 2001	Assistant lecturer of statistics, department of Mathematical statistics, Institute of Statistical studies and research. Cairo University, Egypt.
1998-2001	Visiting Assistant lecturer, faculty of commerce, English section, Cairo- University, Egypt.
1995-1997	Instructor of statistics, department of Mathematical statistics, Institute of Statistical studies and research. Cairo University, Egypt.
1993- 1995	Employee, The Arab Contractors Company, department of computers- Cairo- Egypt.
1991- 1993	Instructor in statistics, department of mathematics, Ain Shames University- Cairo- Egypt.

## ***Students Supervised***

Served as a supervisor for the following graduate students:

- Rasha Saber Elsharawy Elbagoury, M.Sc. Distribution Theory, ISSR – Cairo University, 2017
- Nada Abd El-bast Adlan Mohamed, M.Sc. Distribution Theory, ISSR – Cairo University, 2018
- Amany Shehata Elshaikh – Estimation Theory - ISSR – Cairo University, 2019
- Omar Hussein Sery Mahmoud, M.Sc. Goodness of fit and Normality tests, ISSR – Cairo University, 2019
- Mostafa Shaban, Ph.D. Sampling and Estimation Methods, ISSR – Cairo University, 2020
- Ahmed Elseherty, Ph.D. Truncated Distribution families, ISSR – Cairo University, 2020.

## ***Students Examined***

Served as an internal or external examiner for the following candidates:

- Mostafa Abdelhamid Rabee, M.Sc., ISSR – Cairo University, 2015
- Shimaa Salem Abdelgafar, M.Sc. ISSR – Cairo University, 2016
- Ahmed Ramzy Mahmoud, M.Sc. ISSR – Cairo University, 2016
- Mohamed Salem Abedelwahab, PH.D. - ISSR – Cairo University, 2018

## ***Journal and Conference Articles***

- Ehab M. Almetwally, Hisham M. Almongy, Mohamed A. Sabry (2021). "Monte Carlo Simulation of Stress-Strength Model and Reliability Estimation for Extension of the Exponential Distribution". Thailand Statistician; accepted.
- R. Alshenawy, M. A., E. M. Almetwally and H. M. Elomngy, (2021). "Product spacing of stress–strength under progressive hybrid censored for exponentiated-gumbel distribution," Computers, Materials & Continua, vol. 66, no.3, pp. 2973–2995.
- Hassan, A., Sabry, M., & Elsehetry, A. (2020). A New Probability Distribution Family Arising from Truncated Power Lomax Distribution with Application to Weibull Model. Pakistan Journal of Statistics and Operation Research, 16(4), 661-674. <https://doi.org/10.18187/pjsor.v16i4.3442>
- Amal S. Hassan, Mohamed A. Sabry, Ahmed M Elsehetry (2020). "Truncated Power Lomax Distribution with Application to Flood Data. Journal of Statistics applications and Probability, 9(2), article 14
- Amal S. Hassan, Mohamed A. H. Sabry, and A. Elsehetry (2020). "A New Family of Upper-Truncated Distributions: Properties and Estimation". Thailand Statistician; 18(2): 196-214
- Sabry, M.A., Shaaban, M. (2020). "Dependent Ranked Set Sampling Designs for Parametric Estimation with Applications". Ann. Data. Sci. 7, 357–371. <https://doi.org/10.1007/s40745-020-00247-3>
- Mohamed A. Sabry, Hiba Z. Muhammed, Mostafa Shaaban and Abd El Hady A. Nabih (2019). "Parameter Estimation based on Double Ranked Set Samples with Applications to Weibull Distribution". Accepted, Journal of Modern Applied Statistical Methods.
- Ehab M. Almetwally, Hisham M. Almongy, Mohamed A. Sabry (2019)." Bayesian And Classical Estimation For The Weibull Distribution Parameters Under Progressive Type-II Censoring Schemes". International Journal of Mathematical Archive-10(7), 2019, 6-22

- Mohamed A. Hussian and Essam A. Amin, (2017). "Fuzzy Reliability Estimation for Exponential Distribution Using Ranked Set Sampling", *International Journal of Contemporary Mathematical sciences*, 12 (1): 31 – 42.
- M. A., Sabry; H. Z., Muhammed; A., Nabih; and M., Shaaban (2019) "Parameter Estimation for the Power Generalized Weibull Distribution Based on One- and Two-Stage Ranked Set Sampling Designs," *Journal of Statistics Applications & Probability: Vol. 8 : Iss. 2 , Article 5.*
- DOI: <http://dx.doi.org/10.18576/jsap/080205>
- Mohamed A. Hussian, (2014), "Stress strength model for the generalized inverted exponential distribution using ranked set sampling", *International Journal of Advances in Engineering & Technology (IJAET)*, 6(6): 2354-2362.
- Mohamed A. Hussian, (2014), "Bayesian and Maximum Likelihood Estimation for Kumaraswamy Distribution Based on Ranked Set Sampling", *American Journal of Mathematics and Statistics*, 4(1), pp. 30-37.
- Mohamed A. Hussian and Essam A. Amin, (2014), "Estimation and prediction for the kumaraswamy-inverse Rayleigh distribution based on records" *International Journal of Advanced Statistics and Probability*, 2 (1) (2014) 21-27
- Mohamed A. Hussian, (2014), "Transmuted Exponentiated Gamma Distribution: A Generalization of the Exponentiated Gamma Probability Distribution", *Journal of Applied Mathematical sciences (AMS)*, 8(27), 1297 - 1310
- Essam A. Amin and Mohamed A. Hussian, (2014), "A weighted three-Parameter Weibull distribution", *Journal of Applied Sciences Research*, 10(1): 6627-6635.
- Mohamed A. Hussian and Essam A. Amin, (2013), "Estimation of  $R = P [Y < X]$  for the inverted exponential distribution", *International Journal of Mathematical Archive (IJMA)*, 4(6): 1-7.
- Mohamed A. Hussian, (2013), " Estimation of  $P[Y < X]$  for the class of Kumaraswamy-G distributions", *Australian Journal of Basic and Applied Sciences (AJBAS)*, 7(11): pp. 185-169.
- Mohamed A. Hussian, (2013), "A weighted inverted exponential distribution", *International Journal of Advanced Statistics and Probability (IJASP)*, 1(3): pp. 142-150.
- Mohamed A. Hussian, (2013), "On estimation of the stress strength model for the generalized inverted exponential distribution", *Journal of Reliability and Statistical Studies (JRSS)*, 6(2): pp. 55-63
- M. A. Hussian (2012). Inverse Joint Moments of Multivariate Random Variables. *Int. J. Contemp. Math. Sciences*, Vol. 7, 2012, no. 46, 2245 - 2252
- O. Burdakov, A. Grimvall and M. Hussian and Oleg Sysoev (2006). Hasse diagrams and the generalized PAV algorithm for monotonic regression in several explanatory variables. *Submitted to Computational Statistics and Data Analysis*
- M. Hussian, A. Grimvall, O. Burdakov and O. Sysoev (2005). Monotonic regression for the detection of temporal trends in environmental quality data. *MATCH Commun. Math. Comput. Chem.*: **54**, pp. 535-550.
- Hussian, M., Grimvall, A., and Petersen, W. (2004). Estimation of the human impact on nutrient loads carried by the Elbe River. *Environmental Monitoring and Assessment* 96:15-33.
- Anders Grimvall, Mohamed Hussian and, Oleg Burdakov (2003). Isotonic regression and normalisation of environmental quality data. *The Proceedings of TIES, the International Environmetrics Society: Johannesburg, South Africa, 2003.*

- Mohamed Hussian and Anders Grimvall (2003). A generic procedure for simultaneous estimation of monotone trends and seasonal patterns in time series of environmental data. In: The Proceedings of the Information Society and Enlargement of the European Union (Environfo 2003). A. Gnauck, R. Heinrich Eds., Vol. 2, p. 629-634
- Burdakov, O., Sysoev, O., Grimvall, A., and Hussian, M. 2004. An algorithm for isotonic regression problems. In Neittaanmäki, P., Rossi, T., Majava, K., and Pironneau, O. (Eds.) European Congress on Computational Methods in Applied Sciences and Engineering ECCOMAS 2004., Jyväskylä 24-28 July 2004.
- Hussian, M., Grimvall, A., and Burdakov, O. 2004. Monotonic regression for assessment of trends in environmental quality data. In Neittaanmäki, P., Rossi, T., Majava, K., and Pironneau, O. (Eds.) European Congress on Computational Methods in Applied Sciences and Engineering ECCOMAS 2004., Jyväskylä 24-28 July 2004.
- Burdakov, O., Grimvall, A., and Hussian, M. 2004. A generalised PAV algorithm for monotonic regression in several variables. COMPSTAT'2004 Symposium, Physica-Verlag, Springer.
- O. Burdakov, A. Grimvall and M. Hussian (2004). A generalised PAV algorithm for monotonic regression in several variables. In: J. Antoch (Ed.), COMPSTAT, Proceedings in Computational Statistics, 16th Symposium Held in Prague, Czech Republic, 2004. Physica-Verlag, A Springer Company, Heidelberg, NY, pp. 761-767.
- O. Burdakov, O. Sysoev, A. Grimvall and M. Hussian (2006). An  $O(n^2)$  algorithm for isotonic regression. In: G. Di Pillo and M. Roma (Eds) Large-Scale Nonlinear Optimization. Series: Nonconvex Optimization and Its Applications, Springer-Verlag: 83, pp. 25-33.

### ***Technical Reports***

- Hussian A. H. (2013), Reliability estimation of the weighted inverted exponential distribution.
- Hussian A. H. Alshingiti, A. M., Kayid M. A. (2013), Notes on weighted three-parameter Weibull distribution.
- Sultan K. S., Hussian, A. H, Amin E., (2013), Estimation and prediction of record values based on the generalized inverted exponential distribution: Bayesian and non-Bayesian approaches
- Hussian A H, Sultan K. S., Amin E., (2013), Bayesian and non-Bayesian estimation and prediction for the Kumaraswamy inverse Rayleigh distribution based on Records. Submitted to Pakistan Journal of Statistics and Operation Research (PJSOR)
- Hussian A H, Sultan K. S., Amin E., (2013), Record values from the Kumaraswamy inverse Weibull distribution: Bayesian and non-Bayesian approaches.
- Hussian A H, Sultan K. S., Amin E., (2013), Bayesian and non-Bayesian estimation for the Kumaraswamy generalized exponential based on ranked set sampling.
- A. Grimvall, M. Hussian and C. Libiseller (2006). Semiparametric smoothers for trend assessment of multiple time series of environmental quality data. Technical report, Linköping University
- Mohamed Hussian & Anders Grimvall (2005). Trend analysis of mercury in fish using nonparametric regression. Technical report, Linköping University.
- C. Libiseller, A. Grimvall & M. Hussian (2005). Impact of improved wastewater treatment on the concentration of total nitrogen in the Stockholm archipelago. Technical report, Linköping University.

Mohamed Hussian (2005). Simultaneous Decomposition of Monotone Trends and Seasonal Patterns in Time Series of Environmental Data. Technical report, Linköping University.

### **Conferences:**

- The Annual Conference on Statistics, Computer Sciences, and Operations Research (1995-2001, 2006,2007,2014-2018). *Institute of statistical studies and research, Cairo University, Egypt.*
- TIES 2002, *the international Environmetrics Society*. June 18-22, 2002, Genoa, Italy
- SPRUCE VI 2003, *the sixth conference on Statistics in Public Resources and Utilities, and in Care of the Environment*. June 15-19, 2003, Lund, Sweden
- EnviroInfo 2003, *the Information Society and Enlargement of the European Union: 2003* Cottbus, Germany
- ECCOMAS 2004, *the fourth European Congress on Computational Methods in Applied Sciences and Engineering*. (2004, Jyväskylä, Finland)
- COMPSTAT 2004, Computational Statistics, 16th Symposium Held in Prague, Czech Republic.

### **PH.D. Courses**

- Probability Theory
- The Elements of Statistical Learning
- Non-Parametric Regression
- Design of Experiments
- Sensitivity Analysis
- Spatial Statistics
- Advanced Non-Parametric Regression
- Environmental Statistics
- Statistical Inference-
- Time Series Analysis
- Modern Regression Techniques
- Environmental Sciences
- Presentation Techniques
- Stochastic Processes
- Multivariate Method-
- Computer - Intensive Methods.
- Short Course: Estimation of Human Impact on the Environment, June 16-17, 2002, Genoa, Italy
- Workshop: Detection and Attribution of Environmental Change, November 25-26, 2002, Linköping, Sweden

### **Teaching Courses**

- Mathematical Statistics
- Probability Theory
- Time Series Analysis
- Statistical Inference
- Linear Algebra
- Modern Regression Techniques
- Multivariate Analysis
- Introduction to Computer Sciences
- Calculus and Advanced Calculus
- Introduction to Operation Research
- Mathematics of finance
- Insurance

- Matrix Algebra
  - Multivariate Statistics
  - Non-Parametric Regression
  - Stochastic Processes
  - - Linear Models
  - Applied Statistics
  - Linear Optimization
  - Statistical Data Analysis
  - Advanced Multivariate Analysis
  - Statistical Packages
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